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Notes on Cyperaceæ.

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SCIRPUS (BLYSMUS) RUFUS, Schrad. Culmo filiformo lævi, 3-15 poll. longo. Foliis 2-4 angustissimis canaliculatis culmo brevioribus. Spica simplici, oblonga, e spiculis 3-8 contiguis, sessilibus, apice culmi spicatis, nuda vel bractea foliosa culmum sæpe superante suffulta. Spiculis distichis lanceolatis, 2-5 floris, 3 lin. longis. Squamis castaneis membranaceis ovatis paucinervatis. Achenium ellipticum, biconvexum, acuminatum, stylo longo continuo bipartito apicatum, basi acutum. Stamina 3. Setis sæpius nullis.

Salt marshes, Manitoba, July 20, 1881. Common on the seashore, Gaspé, Dom. of Canada, Aug. 9, 1882. Macoun. Also native of the north of Europe.

Stem filiform, smooth, 3-15 inches long. Leaves 2-4, very narrow, channeled, shorter than the stem. Spike oblong, simple, of from 3-8 contiguous sessile spikelets at the summit of the stem, naked or subtended by a narrow leaf-like bract that often exceeds the stem. Spikelets 2 ranked, lanceolate, 3 lin. long, 2-5 flowered. Scales chestnut, membranous, ovate, few-nerved. Nut elliptical, biconvex, acuminate, tipped by the long continuous bipartite style, acute at base. Bristles commonly none. Stamens 3.

RHYNOSPORA HARVEYI, sp. n. Glauca. Culmo $1\frac{1}{2}$ -2 ped. alto, gracili, triangulo, lævi, basi plurifoliato. Foliis 1 lin. latis, 6-10 poll. longis, apice scabro attenuatis; culmeis 2, supremum medio culmo ortum. Vaginis 1 poll. longis. Bracteis herbaceis, angustis corymbis longioribus. Corymbis 2-3, remotis, suprema majore composita, brevi 2-3 ramoso (ramis $\frac{1}{2}$ poll. longis vel brevioribus), reliquis subsimplicibus pedunculatis. Pedun-

culis 1-1½ poll. longis. Spiculis orbiculari-ovatis, acutis, ramulosum apice 3-6 aggregatis, bracteolis angustis brevioribus. Flos unica fertilis. Squamis castaneis margine angustissimo albidis; inferioribus 2 parvis oblongis obtusis emarginatis vel acutis mucronatis; reliquis magnis, concavis, mediis rotundo-obovatis obtusis marginatis e sinu mucronatis (mucrone albo recurvato); superioribus ovatis acutis vel mucronulatis achenia paulo superantibus. Achenium castaneum, obovatum biconvexum, circa 1 lin. longum, transverse recte rugulosum, tuberculo depresso conico basi ovali soluto $\frac{2}{3}$ longius. Setis 6 antrorsum denticulatis achenis 3-4 plo. brevioribus.

Grand Prairie, E. Arkansas, *F. L. Harvey*, 1883.

Glaucous. Stem 1½-2 feet high, slender, triangular, smooth, several leaved at base. Leaves 1 line broad, 6-10 inches long, tapering to a rough point; stem leaves two, the upper at the middle of the stem. Sheaths 1 inch long. Bracts green, narrow, longer than the corymbs. Corymbs 2-3, remote; the uppermost the largest, compound, 2-3 short branched, branches ½ inch long or less; the others nearly simple, peduncled. Peduncles 1-1½ in. long. Spikelets orbicular-ovate, acute, aggregated 3-6 together at the top of the branchlets, shorter than their narrow bractlets. Only one fertile flower. Scales chestnut, with a very narrow white border; the lower two small, oblong, obtuse, emarginate or acute; the others large, concave, the middle ones round, obovate, obtuse, emarginate, a white recurved mucro inserted in the sinus; the upper ovate, acute or short mucronate, a little longer than the nut. Nut chestnut, obovate, biconvex, about 1 line long, finely transversely wrinkled in straight lines, $\frac{2}{3}$ longer than the depressed-conical, oval, free based tubercle. Bristles 6, upwardly toothed, $\frac{1}{3}$ - $\frac{1}{4}$ the length of the nut.

Very like *R. cymosa*, Nutt. It differs from that species in its narrower leaves, its monocarpous spikelets, its larger, more tumid nut, and its finer, not wavy wrinkles.

CAREX STRAMINEA, Schk., var. INVISA, var. n. Cæspitosa multiculmis. Culmis gracilibus, angulis acutis scabris, infra medium foliatis. Foliis longe vaginatis, lineam latis, sursum attenuato-filiformibus, culmis longioribus vel brevioribus. Bracteis e basi lanceolata margine albida filiformibus, 1-6 poll. longis, inferioribus 1-2 culmum proximis spiculis superantibus. Spica solitaria oblonga vel subobovoidea erecta, cernua vel apice pendula, 3-5 poll. longa, e spiculis 3-12 congestis, contiguis vel alternatis subdistantibus; vel spicis 1-3, inferioribus remotis pedunculatis apice spiculas 1-4 gerentibus. Pedunculis 1-12 poll. longis læviusculis. Spiculis

ellipticis, basi acutis, apice apertis, 4-6 lin. longis. Squamis membranaceis, argenteis, demum pallide castaneis, lanceolatis, acutis, breve scabro-aristatis, perigyniis angustioribus, inferioribus iis longioribus superioribus brevioribus. Perigyniis pallide viridibus, $2\frac{1}{2}$ -3 lin. longis, $\frac{1}{2}$ lin. latis, ovalibus vel subobovatis alatis acuminato-rostratis, rostro bidenticulato margine serrato dentato, dorso fisso, tenui nervatis, lateribus corrugatis. Achenium castaneum, oblongum, lenticulare, stipitatum perigynio laxe inclusum, eo duplo brevius et angustius.

Common on margins of ponds and in ditches in sandy soil, E. Massachusetts. Mt. Desert, Maine.

Well distinguished by its long, thread-like bracts.

Tufted, bearing many stems. Stems slender, the sharp angles rough, leaved below the middle. Leaves long-sheathed, a line broad, tapering to a thread-like summit, longer or shorter than the stem. Bracts thread-like from a white margined lanceolate base, 1-6 in. long; the lower longer than the stem; the next above than their spikelets. Spike solitary, oblong or subobovoid, erect, nodding or pendulous at the top, 3-5 in. long, composed of 3-12 congested contiguous or alternate subdistant spikelets; or spikes 1-3, the lower remote, peduncled, bearing at the top 1-4 spikelets. Peduncles 1-12 in. long, smoothish. Spikelets elliptical, acute at base, open above, 4-6 lin. long. Scales membranous, silvery, becoming pale chestnut, lanceolate, acute, roughly short-awned, narrower and the lower longer and the upper shorter than the perigynia. Perigynia pale green, $2\frac{1}{2}$ -3 lin. long, $\frac{1}{2}$ lin. broad, oval, or subobovate, winged, acuminate, beaked, the beak bidenticulate, serrate-toothed on the margin, fissured on the back, delicately nerved, the sides wrinkled.

CAREX PRÆGRACILIS, sp. n. Culmis (ima parte et foliis culmeis deficientibus) 26 poll. longis, strictis tenuissimis, lateribus vix $\frac{1}{2}$ lineam latis, angulis acutis spura scabris. Foliis sterilibus attenuato filiformibus, convolutis, sectione transversa perfecte circulari. Spica ferruginea oblongo-lineari, $\frac{1}{2}$ poll. longa, e spiculis 3-4 contiguous sessilibus, suprema majore claviformi basi mascula, cæteris femineis ellipticis paucifloris. Bracteis e basi ovata, margine hyalina complectente, attenuato aristatis, aristis scabris, subexcurvis spiculis longioribus, culmo plerumque brevioribus. Squamis bracteis conformibus, marginibus latioribus, aristis brevioribus, perigynia tegentibus. Perigyniis cartilagineis ferrugineis, basi pallidis, glabris, ovatis, acuminate-rostratis substipitatis $1\frac{1}{2}$ lin. longis, $\frac{3}{4}$ lin. latis, rostro antice alte fisso, fissuræ marginibus albidis, facie exteriori convexis, faciei interioris marginibus incurvis, supra serra-

tis; obscure nervatis. Achenium castaneum rotundo-ovatum biconvexum perigynium implens. Stigmata duo, stylus inclusus.

San Diego, California, *Miss Scott*, 1880.

Stem (the lower part and stem leaves wanting) 26 in. high, straight and slender, scarcely half a line broad on the side, the sharp angles rough above. Sterile leaves thread-like, convolute, the cross section exactly circular. Spike ferruginous, oblong linear, $\frac{1}{2}$ -inch long, of 3-4 contiguous, sessile spikelets, the uppermost club-shaped, male at base, the others elliptical, female, few-flowered. Bracts from an ovate hyaline-margined base which encircles the stem, tapering to rough, somewhat spreading awns, that are longer than their spikelets and commonly shorter than the stems. Scales similar to the bracts, with broader margins and shorter awns, covering the perigynia. Perigynia cartilaginous, ferruginous, pale at base, glabrous, ovate, acuminate-beaked, slightly stalked, $1\frac{1}{2}$ line long, $\frac{3}{4}$ line broad, long fissured on the outer face (the margins of the fissures whitish), convex on the outer face, the margins of the inner face incurved and serrate above; obscurely nerved. Nut chestnut, round-ovate, biconvex, filling the perigynium. Stigma, 2. Style included.

Resembling *C. glareosa*, Wahl., but a much taller plant, with very different bracts, scales and fruit.

CAREX SPICULOSA? Fries. Cæspitosa. Culmo $1\frac{1}{2}$ - $2\frac{1}{2}$ ped. alto, acutangulo, scabro, basi vaginis aphyllis tecto. Foliis 1- $1\frac{1}{2}$ lin. latis, longe attenuatis, marginibus apiceque triangulari scabris, culmo brevioribus; vaginis fibro-reticulatis. Bracteis foliatis, infimo culmum paule superante, sequentibus gradatim brevioribus. Spica 5-6 poll. longa, e spiculis 5-6 approximatis; masculis 1-3, $\frac{1}{3}$ -2 poll. longis, linearibus; reliquis femineis vel apice masculis, cylindricis basi angustatis laxifloris, $1\frac{1}{2}$ -2 poll. longis, 2 lin. latis, exserte pedunculatis arrectis, infima subremote subnutanta. Pedunculis $\frac{1}{3}$ -1 poll. longis. Squamis triplinerviis, masculis ob lanceolatis abrupte acutis; femineis purpureis carina pallida acutis, vel plus minus scabro-aristatis perigyniis longioribus. Perigyniis stramineis $1\frac{1}{4}$ lin. longis, $\frac{1}{2}$ lin. latis, obovatis, oblongis, vel ovatis, acuminatis rostellatis, rostri ore integro, pauci-nervatis, plano-convexis, marginibus superne parce dentatis. Achenium pallide castaneum, obtusum, marginibus indentatum perigynio $\frac{1}{2}$ brevius. Stamina 3. Stigmata 2.

Salt marshes Medford and Arlington, Massachusetts. *C. spiculosa* is a native of the shores of the White Sea, Russia.

Cæspitose. Stem $1\frac{1}{2}$ - $2\frac{1}{2}$ feet high, sharply angled, scabrous, covered at base with leafless sheaths. Leaves 1- $1\frac{1}{2}$ lines broad,

tapering to a long, slender summit, rough on the margins and the triangular apex, shorter than the stem, their sheaths fibrous-netted. Bracts leafy, the lowest a little longer than the stem, the succeeding gradually shorter. Spike 5-6 in. long, of 5-6 approximate spikelets; the male 1-3, $\frac{1}{3}$ -2 in. long, linear; the rest female or male at top, cylindrical, narrowed and loosely flowered at base, $1\frac{1}{2}$ -2 in. long, 2 lines broad, exsertly peduncled, ascending, or the lowest a little remote and somewhat nodding. Peduncles $\frac{1}{3}$ -1 in. long. Scales three-nerved, the male oblanceolate abruptly acute, the female purple, with pale keel, acute or more or less roughly awned, longer than the perigynia. Perigynia straw-colored, $1\frac{1}{4}$ lines long, $\frac{1}{2}$ line broad, obovate, oblong or ovate-acuminate, short-beaked, the orifice of the beak entire, few nerved, plano-convex, sparingly toothed on the upper margins. Nut pale chestnut, obtuse, indented on the margins, half as long as the perigynium. Stamens 3. Stigmas 2.

Carex spiculosa is known only by a short description by Fries in his Summa, and by a fuller but still incomplete one by Andersson in his Cyper. Scand. and by a figure without text in Dr. Boott's Ill. Car. The plant above described has a close resemblance to *C. salina*, Wahl. It differs from it in the fibrous reticulation of the sheaths of the leaves. The lowest spikelet is more distant on a longer peduncle and somewhat nodding. If, upon a more complete knowledge of *C. spiculosa*, the Medford plant shall be proved not to belong to that species, it may perhaps be considered as a hybrid. It grows in company with *C. salina* and *C. maritima*, Murray, and quite near to *C. angustata*, Boott, and *C. vulgaris*, Fries.

CAREX HISPIDA, Willd. (*C. echinata*, Desf. Boott.) Glauca. Rhizomate crasso, lignoso, squamis fuscis imbricatis tecto. Culmo valido, obtusangulo, lævi, basi plurifoliato, 2-6 ped. alto. Foliis 3-6 lin. latis, sursum longe attenuatis, culmo brevioribus, lævibus, carinatis, lateribus recurvatis, marginibus et carina dentatis, basi fuscis complicatis, vaginis antice sæpe reticulato-fissis, fibris coloratis. Bractea infima plerumque culmo longiore evaginata, vel vagina $\frac{1}{2}$ -3 poll. longa prædita. Spica 9-18 poll. longa e spiculis 4-10 cylindricis, densifloris, arrectis; masculis 3-6, $1-3\frac{1}{2}$ poll. longis, gracilibus, contiguis, sessilibus vel breve pedunculatis; inferioribus nunc ternatis; reliquis femineis, vel superioribus supra plus minus masculis, 2-4 poll. longis, 3-4 lin. latis; singulis vel mediis geminatis vel ternatis (una earum omnino vel apice mascula); extremis singulis; inferioribus nunc remotis, raro basi attenuatis, nutantibus, pedunculatis. Pedunculis plerumque

brevibus, subinde 1-13 poll. longis. Squamis membranaceis, purpureis, hyalino-marginatis, trinerviis; masculis oblongis vel obovatis, obtusis vel breviaristatis; femineis lineari-lanceolatis, truncatis vel acutis, plus minus aristatis; arista pallida, lata, marginibus serrata. Perigyniis membranaceis, stramineis vel ferrugineis, circa 2 lin. longis, 1 lin. latis, ovalibus vel obovatis, abrupte cylindrico-rostellatis, rostri ore pertuso, integro vel emarginato dilatato, antice planiusculis, dorso convexo angulatis, paucinerviatis, maturitate apice inflatis, divergentibus scabris, marginibus ciliato-dentatis, squamis latioribus longioribus vel (arista) brevioribus. Achenium castaneum, triquetrum, ovoideum vel obovoideum, stylo æquali apicatum, stipitatum, perigynio $\frac{1}{2}$ brevius, et eo laxè inclusum. Stamina 3, et (f. Drejer) 4. Stigmata 3-2.

S. Arizona, *Lemmon*, April, 1880. *Pringle*. *M. E. Jones*, 1882. Littorum maris Mediterranei in Europa et Africa incola.

Glaucous. Rootstock thick, woody, clothed with dark imbricated scales. Stem stout, obtusely angled, smooth, several leaved at base, 2-6 feet high. Leaves 3-6 lines broad, tapering to a long slender summit, shorter than the stem, smooth, keeled, recurved on the sides, toothed on the margins and keel, dark-colored and conduplicate at the base, the inner face of the sheaths often breaking up into colored netted fibres. The lowest bract commonly longer than the stem, not sheathed, or sometimes furnished with a sheath $\frac{1}{2}$ -3 inches long. Spike 9-18 inches long, of from 4-10 cylindrical, densely flowered, ascending spikelets; the male 3-6, 1-3 $\frac{1}{2}$ inches long, slender, contiguous, sessile or short peduncled, the lower sometimes grouped in threes; the rest female, or the upper more or less male above, 2-4 inches long, 3-4 lines broad, single, or the middle ones in pairs or threes (one of them male or male at top), the highest and lowest single; the lower sometimes remote, rarely attenuated at base, nodding, peduncled. Peduncles generally short, sometimes 1-13 inches long. Scales membranous, purple, hyaline-margined, three-nerved; the male oblong or obovate, obtuse or abruptly short-awned; the female linear-lanceolate, truncate or acute, more or less awned; the awn broad, pale, serrate on the margins. Perigynia membranous, straw-colored or ferruginous, about 2 lines long, 1 line broad, oval or obovate, abruptly cylindrically short-beaked; the orifice of the beak open, entire or emarginate, dilated; nearly flat on the inner face, angled, few nerved on the outer, inflated at maturity, and diverging, rough, the margins ciliate toothed, broader, longer, or, including the awn, shorter than the scales. Nut chestnut, three-

sided, ovoid or obovoid, tipped by the equal style, stalked, loosely inclosed in and half as long as the perigynium. Stamens 3 and (according to Drejer) 4. Stigmas 3-2.

Carex hispida was discovered about a hundred years ago by Desfontaines, on the coast of Barbary, and named by him *C. echinata*. As this name had been previously given, by Ehrhart, to another species since named *C. stellulata* by Goodenough, Willdenow changed it to *C. hispida*, and he has been generally followed by caricologists, with the exception of Dr. Boott. *C. hispida* is a not uncommon plant on the shores of the Mediterranean Sea, and has received different names from different collectors. Drejer, who has discussed the species at length in his *Symbolæ*, quotes thirteen synonyms. He characterizes it as extremely variable. The perigynium of the Arizona specimens is at first plano-convex, agreeing with the European plant, but at full maturity is inflated at top and divergent. Willdenow's character was taken from immature specimens, as he allows. The only roughness of the perigynia mentioned by him is "capsulis marginatis hispidulis" which exactly describes the Arizona specimens. The affinity of *C. hispida* is, according to Drejer, with *C. glauca*, Scop., *C. trinervis*, Desgl., and *C. setigera*, Don; while Dr. Boott sees a closer resemblance to his *C. laciniata*.

CAREX ASSINIBOINENSIS, sp. n. Culmo 2-2½ pedes alto, filiformi, debili lævi basi vaginis lineari-lanceolatis, purpureis, laxis, efoliatis, margine sparse reticulato-fissis tecto, fibris capillaribus. Foliis 4-6 poll. longis, 1 lin. latis, margine et apice attenuato-triangulari scabris, culmo brevioribus. Bractea mascula squamæformi aristata spicula brevior, bracteis femineis linearibus, apice longe attenuatis, spiculas suas superantibus, culmo brevioribus, vaginatis. Vagina 1-1½ poll. longa. Squamis membranaceis, pallide ferrugineis, nervo medio angusto viridi, lanceolatis, acuminatis vel aristatis; femineis basi amplectentibus perigyniis aequalibus longioribus vel brevioribus. Spica 7-11 poll. longa e spiculis 3-4 distantibus suprema mascula, lineari-oblongata pollicem longa, ceteris femineis anguste cylindricis, ½-1¼ poll. longis alternatum remotiuscule pauci (5-6) floris flexuosis nutantibus, pedunculatis. Pedunculis 1½-3 poll. longis scabrisculis. Perigyniis crustaceis lanceolatis, trigonis, obtusangulis, 3 lin. longis, 1 lin. crassis, basi substipilatis in rostrum longum oblique sectum attenuatis, ore longo integro acuto hyalino; tuberculis acutis dentatis apice setigeris asperatis, infra sordide flavis, supra viridibus, basi grosse nervatis. Achenium ellipsoideum, obtusum, arete inclusum, perigynii dimideo brevius. Stylus elongatus. Stigmata 3.

Assiniboine Rapids, June 14, 1879, *Macoun*. Lake Manitoba, June 9, 1881, *Macoun*.

Stem 2-2½ feet high, filiform, weak, smooth, clothed at the base with loose, linear-lanceolate, purple, leafless sheaths, their margins breaking up into fine, hair-like netted fibres. Leaves 4-6 in. long, 1 line broad, rough on the margins, and at the very slender, triangular summit, shorter than the stem. Male bract, scale-like, awned, shorter than its spikelet; female bracts linear, tapering to a very slender point, longer than their spikelets, shorter than the stem, sheathed. Sheaths 1-1½ inches long. Scales membranous, of a pale, rusty color, the midnerve narrow, green, lanceolate, acuminate or awned; the female clasping at base, longer or shorter than, and as broad as the perigynia. Spike 7-11 in. long, of 3-4 distant spikelets, the uppermost male linear oblanceolate 1 in. long; the others, female, narrowly cylindrical, ½-1¼ in. long, alternately, and rather remotely few (5-6) flowered, flexuous, nodding, peduncled. Peduncles 1½-3 in. long, roughish. Perigynia crustaceous, lanceolate, obtusely 3 angled, 3 lines long, 1 line thick, somewhat stalked, tapering to a long, obliquely cut beak, the long, entire sharp orifice hyaline; rough, with sharp, toothed, bristle tipped tubercles, dull yellow below, green above, coarsely nerved at base. Nut ellipsoidal, obtuse, closely invested by the perigynium and not half its length. Style elongated. Stigmas, 3.

Like *C. debilis*, Mx. in habit, but distinguished from it and others of the *debilis* group by the sculpture of the perigynium and its long, entire sharp pointed orifice.

CAREX ACUTATA, Boott. Rhizomate repente, stolonifero. Culmo 1½-2 ped. alto, valido, basi foliis amplectentibus clauso. Foliis 3-5 lin. latis, culmo longioribus, planis, carinatis, reticulato-venosis. Bractea infima 6-15 poll. longa, nunc vaginulata; reliquis spiculis duplo triplo longioribus, nisi summa brevis. Spica 1-7 poll. longa, e spiculis 4-6 oblongis vel cylindricis; superioribus vel omnibus aequalis, contiguis, sessilibus, vel spicatim dispositis; masculis 1-2 fusco-ferrugineis, subinde abbreviatis, vel 1-2¼ poll. longis, 1-1½ lin. latis; reliquis femineis, vel superioribus apice masculis, densifloris, sessilibus, vel inferioribus pedunculatis, 8 lin. to 2½ poll. longis, 4 lin. latis. Pedunculus infimus ½-1½ poll. longus. Perigyniis ovalibus rostratis, acute bifidis, ventricosis, modice biconvexis, costato-nervosis, glabris, lucidis, tesselatis, pallide viridibus, 1⁹/₁₀ lin. longis ⁶/₁₀ lin. latis, squamis purpureis, nervo pallido, ellipticis vel ovalibus, acutis, muticis, ciliatis, vel hispido-aristatis longioribus vel bre-

rioribus. Achenium oblongo-ellipticum, triquetrum, ferrugineum, basi styli contorta vel depresso-curvato apiculatum.—Ill. Car. p. 138.

Arizona, Santa Rita Mts., May 28, 1882, *C. G. Pringle*. Huachuca Canon, June 24, 1882, *J. G. Lemmon*. Previously described as a native of West South America and of Brazil.

Rootstock creeping, stoloniferous. Stem $1\frac{1}{2}$ –2 feet high, stout, concealed below by the clasping leaves. Leaves 3–5 lines broad, longer than the stem, flat, keeled, netted-veined. Lowest bract 6–15 in. long, occasionally short sheathed, the rest, with the exception of the short uppermost one, two or three times longer than their spikelets. Spike 1–7 in. long, of 4–6 oblong or cylindrical spikelets; the upper or all of equal height, contiguous, sessile, or disposed in spikes; male spikelets 1–2, of a dark, rusty color, either short or $1-2\frac{1}{4}$ in. long, $1-1\frac{1}{2}$ lines broad, the rest female, or the upper male at top, densely flowered, sessile, or the lower peduncled, 8 lines to $2\frac{1}{4}$ in. long, 4 lines broad. Lowest peduncle $\frac{1}{2}$ – $1\frac{1}{2}$ in. long. Perigynia oval, beaked, sharply bifid, ventricose, somewhat biconvex, ribbed, smooth, shining, checkered, pale green, $1\frac{9}{10}$ lines long, $\frac{6}{10}$ line broad, longer or shorter than the purple, pale nerved elliptical or oval, sharp-pointed, ciliate, or hispidly awned scales. Nut oblong-elliptical, three-sided, ferruginous, tipped by the contorted or depressed curved base of the style.

Allied to *C. tentaculata* and its allies.

CAREX LEMMONI, n. sp. Cæspitosa. Culmis 2 ped. altis, latere $\frac{1}{2}$ lin. latis, obtusangulis lævibus, vaginis omnibus foliiferis, infra medium foliatis. Foliis lineari-lanceolatis, apice subulato triquetris, erectis, vaginatis, $1\frac{1}{2}$ lin. latis, culmeis 3–4, sterilibus 6–10 poll. longis. Bracteis foliatis vaginatis, spiculis longioribus, culmis brevioribus. Vaginis $\frac{1}{2}$ – $1\frac{1}{4}$ poll. longis. Ligula oppositifolia obtusa. Squamis pallide-ferrugineis, membranaceis, margine hyalina, oblongo-obovatis, obtusis, mucronatis, perigynia æquantibus. Perigyniis ferrugineis, membranaceis, lævibus, triquetris, oblongis, basi acutis, acuminato rostratis, $1\frac{3}{4}$ lin. longis, $\frac{1}{2}$ – $\frac{3}{4}$ lin. latis, rostro bidentato margine serrato dentato, nervatis. Achenium atro-castaneum, triquetris obovoideum, basi productum apice obtusum stylo æquali apiculatum. Stigmata 3.

J. G. Lemmon, 1875.

Tufted. Stem two feet high, half a line broad on the sides, obtusely angled, smooth, leaved below the middle, all the sheaths leaf bearing. Leaves linear-lanceolate, triangular awl pointed at top, erect, sheathed, $1\frac{1}{2}$ lin. broad; stem leaves 3–4,

the sterile 6-10 in. long. Bracts leafy sheathed, longer than their spikelets, shorter than the stems. Sheaths $\frac{1}{2}$ - $1\frac{1}{4}$ inches long. Ligule opposite to the blade, obtuse. Scales pale rusty, membranous, with hyaline margins, oblong-obovate, obtuse, mucronate, equaling the perigynia. Perigynia ferruginous, membranous, smooth, triangular-oblong, acute at base, acuminate-beaked, $1\frac{3}{4}$ lin. long, $\frac{1}{2}$ - $\frac{3}{4}$ lin. broad, the beak bidentate, serrate toothed on the margins, nerved. Nut dark chestnut, triangular obovoid, tapering to the base, obtuse at the top, tipped by the equal style. Stigmas, 3.

Allied to *C. distans*, L. Stem and leaves of a tawny yellow color.

In a specimen of *Rhynchospora* (*Ceratoschoenus*) *macrostachya*, Torr., from Arkansas, the perianth consists of short, stout, awl-shaped bristles, thus destroying one of the characters supposed to distinguish it from *R. corniculata*, Gray.

Carex glauca, Scop., was found growing in sterile clayey soil near London, Ont., in June, 1881, by Dr. T. J. W. Burgess, and in a railway cutting near Windsor, Nova Scotia, by Prof. Macoun, in June, 1883.

Carex hirta, L., is occasionally met with near Boston and in ballast heaps at Philadelphia. Both species are probably immigrants from Europe.

Notes on *Phoradendron flavescens*, Nutt. I.

BY J. SCHNECK.

Although this parasite is common throughout the southern half of our Union, the dates of the different stages in the evolution of its bud to the mature fruit appear to be still imperfectly understood. The following observations are taken from notes made during the past eighteen months, and may help to develop the facts in the case.

Dec. 25, 1882—Fruit abundant and ripe. Mature pistillate flowers on the same plants, but these are always toward the distal extremity from the fruit. Staminate flowers, on separate plants, withered, but the stamens clearly visible, in the more perfect, on pressing back the sepals. *Buds in the axils of the leaves.*

Jan. 15, 1883—Staminate spikes withered and dropping off, but no change in the pistillate.

April 20, 1883—Could find no male spikes, but many plants that have no spikes at all. Pistillate flowers larger and more